

[PERMEABLE MEMBRANE CLEAN STATION]

Abstract

Disclosed in a cleaning apparatus (e.g., clean station) used during the production of semiconductor wafers. The clean station includes a holder for holding and rotating a semiconductor wafer, a shield surrounding the semiconductor wafer, and a dispenser positioned to dispense a cleaning fluid on the semiconductor wafer. The surface of the shield facing the semiconductor wafer comprises a semi-permeable material. The semi-permeable material prevents cleaning fluid ejected from the surface of the rotating semiconductor wafer from forming into a mist and being re-deposited back on the semiconductor wafer. The mist is harmful because it contains foreign material particles. The semi-permeable material comprises an absorptive material, a screen material, a perforated material, a finned material, etc. and is designed such that cleaning fluid ejected from the surface of the rotating semiconductor wafer is collected by and/or drains down the semi-permeable material. The semi-permeable material can be a permanent part of the shield or a disposable material designed to

be periodically removed from the shield and replaced.